REMARKS

Reconsideration and allowance of this application are respectfully requested.

Referring to the rejection of claim 32 under 35 U.S.C. 112, second paragraph, the phrase "comprising an activation layer" has been deleted from line 1 of claim 32. Moreover, the informality in line 5 of claim 32 has been corrected.

Referring to section 4 of the Office Action, and, in particular, to the rejection of claims 33-35 (see the last two full sentences at page 3 of the Office Action), it is stated in the Office Action that the claimed upper limit of $1x10^{19}$ atoms/cm^3 is within the lower limit of $1.5x10^{19}$ atoms/cm^3 of Nakagawa because "the concentration does not change much with the 1.5 factor when it is on the order of 10^{19}." Nevertheless, the upper limit of the claims is clearly less than the lower limit of Nakagawa and it is thus submitted that Nakagawa does not anticipate the claims in this regard.

Hence, claims 33-35 distinguish over Nakagawa not only for the above cited reason but also because they are directed to the feature where the semiconductor layer shows a Raman shift at a wave number of 512cm^{-1} or higher. Moreover, the remaining claims also distinguish over Nakagawa because they are characterized by the combined features of (a) the presence of carbon, nitrogen or oxygen in an amount less than a predetermined maximum and (b) the presence of a predetermined crystallinity whereby the electron mobilities in the non-single crystalline channel semiconductor layer can approximate those obtainable with a single crystalline silicon semiconductor layer, as discussed at page 7 of the amendment of February 3, 1995.

Furthermore, with respect to Nakagawa, it is stated in the Office action that "the channel layer is later crystallized by heating the substrate". However, it is urged there is not such a teaching in Nakagawa. Rather, Nakagawa teaches the formation of a polysilicon layer simply by CVD. Thus, in EXAMPLE 1, for example, the polycrystalline silicon film is formed by a CVD process, as described at column 6, line 30 through column 7, line 5. Hence, applicant respectfully traverses the statement that the channel layer is "later crystallized by heating" when in fact crystallization of the channel layer occurs at the time the channel layer is originally formed.

Moreover, it should be noted that the claims have been amended to recite that the channel region is intrinsic to thereby further distinguish over Nakagawa wherein the channel is n-type, see column 7, lines 4 and 5.

Hence, for all of the foregoing reasons, and those stated in the Amendment of February 3, 1995, the claims are patentably distinguishable over Nakagawa.

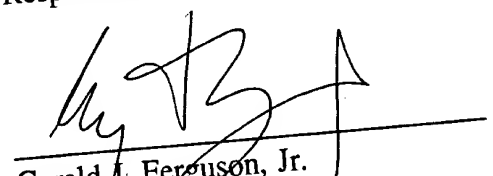
Referring to section 6 of the Office Action, claims 23-31 are rejected under the doctrine of obviousness-type double patenting over the claims of U.S. Patent No. 5,313,076. However, the claims of '076 are directed to an invention different from that of the claims of the subject application. Thus, referring to claims 1, 5 and 9 of '076, all of these independent claims require that laser irradiate the semiconductor film <u>without melting the semiconductor film</u> to make the degree of crystallinity of the semiconductor film higher. However, as illustrated in Appendices I, II and III of the August 8, 1994 amendment, the invention of the subject application is characterized in that the semiconductor layer is formed by <u>melting</u> and crystallizing the semiconductor. Hence, in this first respect the claims of '076 differ from those of the subject

application.

Moreover, the crystallinity of the claims of the subject application are characterized, as discussed above, in that the semiconductor layer exhibits a Raman shift at a wavenumber of 512cm^{-1} or higher while the crystallinity recited in claims 2, 6, and 15 of '076 is such that the semiconductor exhibits a Raman peak (shift) of 517cm^{-1} or less. Hence, although there may be a relatively small overlap in the Raman shift ranges recited in the claims of '076 and those of the subject application, it is clear the subject application is directed to a semiconductor entirely different from that of '076 and thus the remarks above with respect to Nakagawa regarding an "obvious to try" rejection also applies to the double patenting rejection with respect to '076. Hence, it is urged the claims of the subject application are patentably distinguishable with respect to the claims of '076.

In view of the foregoing amendments and remarks, it is urged this case is now in condition for allowance and a notice to that effect is requested.

Respectfully submitted,



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